



# 2026 WATER MASTER PLAN AMENDMENT

Green Valley Special Utility District



FEBRUARY 18, 2026

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UTILITY ENGINEERING GROUP

## Memorandum

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Date: February 18, 2026

To: Mr. Phillip Gage  
General Manager  
Green Valley Special Utility District  
605 FM 465  
Marion, Texas 78124

From: Utility Engineering Group, PLLC  
Garry Montgomery, P.E.  
191 N. Union Avenue  
New Braunfels, Texas 78130

RE: Green Valley Special Utility District (GVSUD) 2024 Water Master Plan – February 2026 Updates

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The following encompasses the updates made to the 2024 Water Master Plan as of February 18, 2026:

- Removal of paragraphs 1.1 and 1.2.
- Table 1-1: Updated to reflect current data.
- Table 3-1 and 3-2 and Figure 3-1 and 3-2: Updated to reflect current data through 2025.
  - Subsequent paragraphs updated to reflect new information.
- Table 4-1: Update to forecast growth through 2075.
  - Subsequent paragraphs updated to reflect new information.
- Table 5-1 and Figure 5-1: Update to show current water inventory.
- Table 5-4, 5-5, 5-6 and 5-7: Updated to current capacities.
- Table 7-1, 7-2, 7-3 7-4 and 7-5: Update historical usage.
  - Subsequent paragraphs updated to reflect new information.
- Table 8-1, 8-2 and 8-3: Update to show completed projects and add priority lists.
- Created Table 8-4 to show completed Operational Improvement Projects.
- Paragraph 9.0: Updated recommendations.
- Exhibit 2: Update per Table 8-1, 8-2 and 8-3.

- End Memo -

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# 1.0 Introduction and Background

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Green Valley Special Utility District (GVSUD) has experienced steady growth since its beginnings as Green Valley Water Service Company in 1963. GVSUD currently serves 19,730 customers in Guadalupe, Comal, and Bexar Counties. In an effort to keep up with growing demands, GVSUD has authorized Utility Engineering Group (UEG) to update this Water Master Plan and provide proposed Capital Improvement Projects (CIPs) for the 5 and 10 year service horizons.

The purpose of this Master Plan is to analyze GVSUD's existing conditions, estimate future water demands, determine the necessary capital improvement projects to meet those demands, estimate proposed project costs, and serve as a guide for long-term water needs, including capital projects.

**Table 1-1 Completed or Financed CIP projects.**

<b>Project</b>	<b>Description</b>	<b>Total Cost</b>
	<b>Complete or In-process CIP projects to be included in Impact Fee Assessment</b>	
1	24" Pipe along GV Road that Connects Plant 1 to Plant 9 - Green Valley Road, Mesa Western to Dean	\$ 1,854,921.48
1A	Plant 15 Lower Seguin Road - Land Acquisition	\$ 146,500.00
1C	I35 Well Side Plant Site - Land Acquisition	\$ 146,500.00
6	16" Pipe from Co-op Meter Station to Plant 3	\$ 2,504,237.31
101	EST @ Hardy Rd and Union Wine - Plant 12	\$ 3,124,000.00
102	24" Weil Road BPS Fill Pipeline -Youngsford to Weil Rd EPS	\$ 3,788,280.01
103	Plant 1 1MG EST	\$ 2,569,654.00
104	GVSUD Take-point Meter Station at AW Texas, & 16" Pipeline	\$ 976,085.20
105	16" Pipe along Abbott Road -FM 1518 to FM 2538	\$ 667,606.87
106	Plant 11 Phase I GST & Pumps	\$ 2,231,000.00
107	Plant 11 Phase II GST and Pumps	\$ 2,514,065.18
108	830' EST @ Plant 3	\$ 3,383,500.00
109	16" Pipe Homestead Fill Line	\$ 1,232,846.00
110	Homestead EST	\$ 2,588,128.93
111	16" Pipe Hallies Ranch	\$ 412,048.99
112	Homestead GST and Pump Station	\$ 1,190,550.00
113	12" & 16" Pipe FM 725 - County Line to Schumann Beach Road	\$ 857,315.09
114	16" Pipe Bolton Road Meter Station to Lower Seguin Road/Santa Clara Road	\$ 1,972,781.00
115	16" Pipe along FM 78 - Wagner to Santa Clara Road	\$ 1,256,996.00
116	16" Pipe along Fm 725 - Zipp Road to Union Wine	\$ 1,435,065.00
117	16" Pipe along Union Wine - FM 725 to Zipp extension	\$ 1,698,654.00
118	16" Pipe along Klein Road Phase I	\$ 1,511,827.20
119	16" Pile along Klein Road Phase II	\$ 996,452.68
120	24" Pipe Green Valley Road Plant 1 to Dean Road	\$ 2,334,560.00
	<b>Total Projected Cost Complete or In-process CIP projects</b>	<b>\$ 39,538,653.46</b>

**Table 1-2 Proposed Capital Improvements Project Status From 2014 Water Master Plan**

Project	Description	Status
1	16" Pipe Line along Terminal loop	F
2	24" Pipe Line that Connects Plant 1 to Plant 9	U
3	12" Pipe along Youngsford Road from Country Lane to Santa Clara	F
4	GVSUD Take-point Meter Station at Zuehl Road & IH10	M
5	16" Pipe Line Along Green Valley Road Plant 1 to Plant 2	F
6	12" Pipe from Wells to Plant 1	F
7	12" Pipe along FM 1518 from Abbott to Kusmierz	F
8	GVSUD Take-point Meter Station at Linne Road & IH10	C
9	24" Pipe Line from Wells to Plant 9 improvements	F
10	12" Pipe Line Along FM 482	F
11	24" Pipe Line IH-35 crossing	F
12	Well Side Booster Pump Station	F
13	Plant 9 improvements	F
14	830' Elevated Storage Tank at Most Western FM 78	F
15	12" Pipe Line along Marion Road from CRWA Pipe to GV Road	F
16	12" Pipe Line along Tolle Road & Country Lane	F
17	750' Elevated Storage Tank at McQueeney	F
18	12" Pipe along Schwab & Wosnig	F
19	Common Ground Storage Tank and Booster Pump Station	F
20	24" Pipe Line connects Existing Wells	F
21	750' Elevated storage Tank of Plant 10	F
22	12" Pipeline along Weil Road -BPS extension to Marion Road	U
23	Pipeline along Klein Road - FM 1044 to FM 725	C
24	830' EST @ Hardy Rd and Union Wine	C
25	Pipeline from FM 725 to CRWA Lake Dunlap WTP	M
26	16" Pipeline along FM 725 - Union Wine to Altwein	M
27	16" Weil Road BPS Fill Pipeline -Youngsford to Weil Rd EPS	C
28	830' EST @ Youngsford and Short Cut Rd	M
29	12" Pipeline along N Santa Clara Rd - Weil Rd to Gerdes Rd	CM
30	16" Pipeline along Schumann Rd -Pioneer Rd to Plant 10	F
31	16" Pipeline along Pioneer Rd (connect)	F
32	8" Pipeline along Lower Valle Ln Weir Rd to Haeckerville Rd	F
33	8" Pipeline along Lower Seguin Rd (connect)	F
34	8" Pipeline along Bolton Rd (connect)	C
35	8" Pipeline along Schmoekel Rd -Stolte Rd to Santa Clare Rd	F
36	GVSUD Take-point Meter Station at Santa Clara Rd & IH10	C
37	750' EST @ Gin Road	F
38	8" Pipeline along FM 775 - Leissner School Rd to Beutnagel Ln	F
39	12" Pipeline along Abbott Road -FM 1518 to FM 2538	MU
40	8" Pipeline along New Berlin Rd -Gable Ln to Miller Rd	F

41	8" Pipeline along Engel Rd . Green Valle Rd to Service Boundary	F
42	Plant 1- 1MG Ground Storage Tank	M
43	16" Pipeline along FM 1044 from Green Valley Rd to Youngsford	F
44	16" Pipeline along Union Wine from FM 1044 to Sunshine Lane	FM
45	16" Pipeline along Youngsford from FM 1044 to FM 725	F
46	16" Pipeline along FM 1044 from Youngsford to Wosnig Road	F
47	830' EST @ Plant 3	C
48	Trinity Well Development	M

Legend: C- completed, U-underway, F- Future work, M- Modified

20 year CIP from 2014 Plan		
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## 2.0 Water Connections

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GVSUD has not experienced significant commercial growth since the 2024 study. The developments in recent years align with residential type meters in more dense developments. For simplification, all GVSUD existing and proposed water connections will be considered equal to a single-family residential meter or Equivalent Dwelling Unit (EDU).

## 3.0 Historical Water Connections and Water Use

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Predicting the growth in connections is difficult due to a variety of factors. The growth and development within an area is attributed, but not limited to: the economy, housing inventory, environmental constraints, economic development incentives, regulatory authorities and roadways/mobility.

The historical connection growth and water usage for the years from 2016 to 2025 are shown in Table 3-1 and Table 3-2, respectively. The district has experienced an annual growth rate average of 5.81% and average water usage of 0.34 acre-feet/connection. For planning we utilized 0.40 AF per connection as referenced in the feasibility studies completed for the District.

**Table 3-1 CCN Service Area Growth rate**

Year	Guadalupe County Population (pop.) <sup>(1) (3)</sup>	Guadalupe County Growth (%)	GVSUD Water Service Connections <sup>(2)</sup>	GVSUD Water Service Growth (%)	Average Growth Rate (%)
2016	153,368	2.66%	11645	8.60%	5.63%
2017	157,368	2.61%	12329	5.87%	4.24%
2018	161,538	2.65%	13331	8.13%	5.39%
2019	166,846	3.29%	13990	4.94%	4.11%
2020	172,706	3.51%	14358	2.63%	3.07%
2021	177,036	2.51%	15273	6.37%	4.44%
2022	182,760	3.23%	16325	6.89%	5.06%
2023	188,608	3.20%	17,499	7.19%	5.20%
2024	195,166	3.48%	18,142	3.67%	3.58%
2025	201,276	3.13%	19,701	8.59%	5.86%
			10-YR Average Growth	5.81%	4.38%

(1) - Figures from 2016-2020 were collected from US Census Bureau website representing Guadalupe County

(2) - Number of water service connections provided by GVSUD

(3) - Population estimates from 2020-2025 are based on 2020 Census

**Table 3-2 Historical water usage**

Year	GVSUD Water Service Connections <sup>(1)</sup>	Total Water Pumped (ac-ft) <sup>(1)</sup>	% Increase in Annual Usage	Water Usage per Connection per Year (ac-ft/yr)
2016	11645	3529	8%	0.30
2017	12329	4166	15%	0.34
2018	13331	4033	-3%	0.30
2019	13990	4293	6%	0.31
2020	14358	5307	19%	0.37
2021	15273	5503	4%	0.36
2022	16325	6243	12%	0.38
2023	17499	6417	3%	0.37
2024	18,142	6668	4%	0.37
2025	19,730	6911	4%	0.35
Average Water Usage (ac-ft/connection/yr)			7%	0.34

<sup>(1)</sup> Information provided by GVSUD

Figure 3-1 displays the historical water connections for the years 2016 to 2025. An average historical growth rate of 7% was experienced in the past 10 years. However, recent years have experienced lower average growth rate, and we are seeing the average water usage per customer increase slightly from 0.30 AF/connection in 2016 to 0.35 AF/connection through 2025. A conservative growth rate of 6% will be used to forecast future connections.

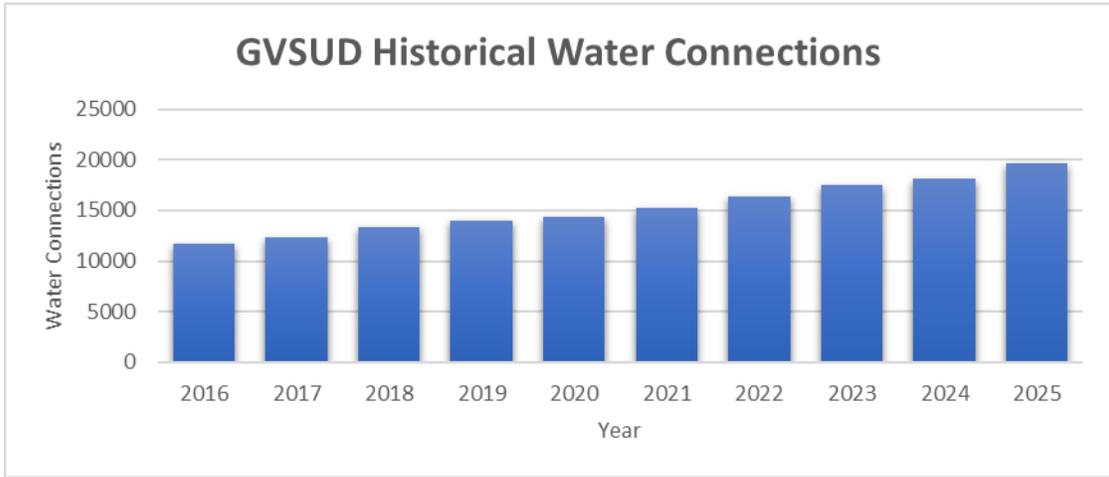


Figure 3-1 GVSUD Historical Water Connections

Figure 3-2 displays the historical water usage for the years 2014 to 2025. The average water usage of 0.34 acre-feet/connection/year.

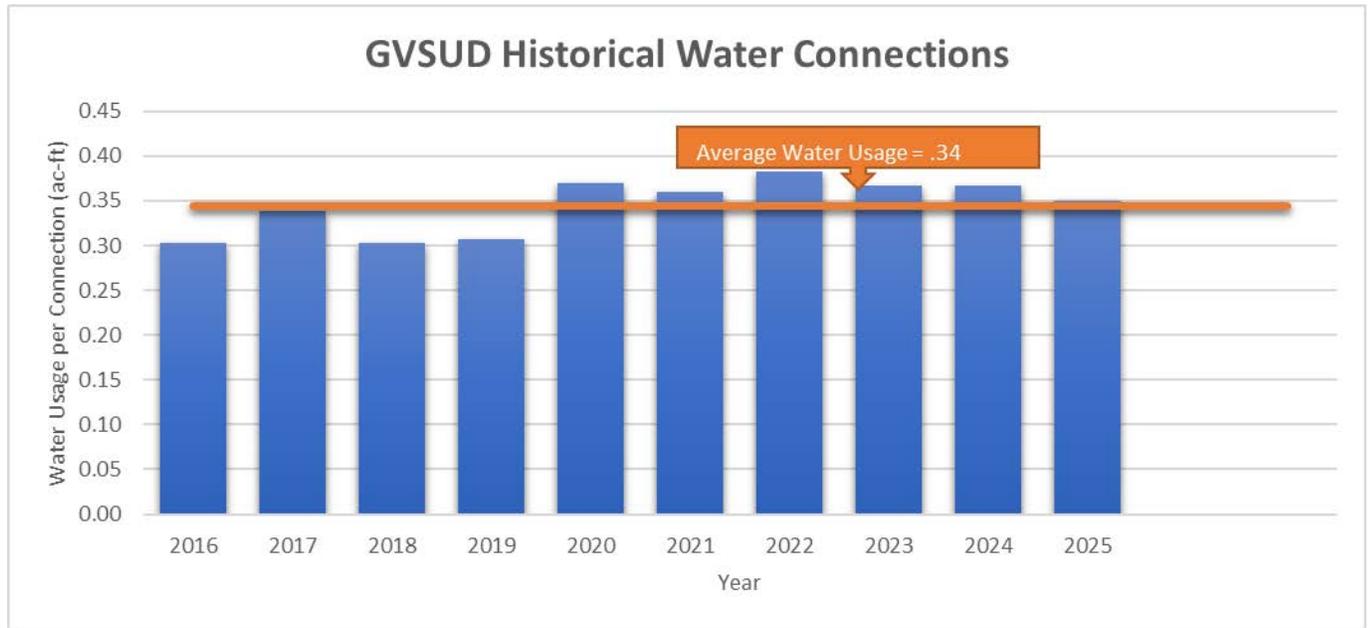


Figure 3-2 GVSUD historical water usage

## 4.0 Projected Water Connections and Water Use

Table 4-1 displays the projected the future water connections based on the 4% average annual growth along with an 6% and 8% average annual growth rate to represent accelerated growth of the GVSUD service area. Current developments underway are listed below. The future connections in conjunction with the 0.34 acre-feet/connection/year average water use was used to determine the future estimated water demand.

This data indicates a projected water demand for the year 2040 of 12,500 acre-feet, 17,280 acre-feet, 23,743 acre-feet for the associated growth rates of 4%, 6%, and 8%, respectively.

**Table 4-1 GVSUD projected growth**

Year	Water Rights	Projected Water Demand (acft)			Projected Water Connections		
	Total acft	4%	6%	8%	4%	6%	8%
2025	13270	6941	7210	7485	19730	19730	19730
2026	13320	7218	7643	8084	20519	20914	21308
2027	13320	7507	8101	8730	21340	22169	23013
2028	13320	7807	8587	9429	22194	23499	24854
2029	13320	8120	9103	10183	23081	24909	26842
2030	13270	8444	9649	10998	24005	26403	28990
2031	24320	8782	10228	11877	24965	27987	31309
2032	24320	9133	10841	12828	25963	29667	33814
2033	24320	9499	11492	13854	27002	31447	36519
2034	24320	9879	12181	14962	28082	33333	39440
2035	26960	10274	12912	16159	29205	35333	42596
2036	26960	10685	13687	17452	30373	37453	46003
2037	26960	11112	14508	18848	31588	39701	49683
2038	26960	11557	15379	20356	32852	42083	53658
2039	26960	12019	16301	21984	34166	44608	57951
2040	28836	12500	17280	23743	35533	47284	62587
2045	28836	15208	23124	34886	43231	63277	91961
2050	28836	18503	30945	51259	52597	84679	135120
2055	28836	22511	41411	75317	63992	113319	198536
2060	28836	27388	55418	110665	77856	151646	291715
2065	28836	33322	74161	162603	94724	202937	428625
2070	28836	40541	99245	238918	115246	271576	629790
2075	28836	49325	132812	351049	140215	363430	925369

## 5.0 Summary of Existing Water System

GVSUD was divided into pressure planes based on Hydraulic Grade Lines in order to quantify the existing and projected number of connections. These areas are shown in Attachment ‘A’, Existing Pressure Planes Map. Table 5-1 summarizes the existing connections per pressure planes. As of December 2025, there are 19,701 existing connections in GVSUD’s system.

**Table 5-1 Existing connections per pressure plane**

Pressure Plane	Connections	% of Total Connections	Water Source
<b>Plant 1</b>	4,745	24.09%	EA, Trinity, Wells Ranch, Lake Dunlap
<b>Plant 2</b>	782	2.48%	EA, Trinity, Wells Ranch, Lake Dunlap
<b>Plant 3</b>	309	1.57%	Wells Ranch
<b>Plant 4 &amp; 12</b>	6,222	31.58%	Lake Dunlap
<b>Plant 5</b>	371	1.88%	EA, Trinity, Wells Ranch, Lake Dunlap
<b>Wells</b>	140	0.71%	EA, Trinity
<b>Plant 9</b>	1,634	8.29%	EA, Trinity
<b>Plant 10</b>	0	0.00%	Wells Ranch
<b>Plant 11</b>	0	0.00%	EA, Trinity, Wells Ranch, Lake Dunlap
<b>1518 EST</b>	1,620	8.22%	Wells Ranch
<b>Leissner</b>	1,201	6.10%	Wells Ranch
<b>Haeckerville</b>	269	1.37%	EA, Trinity, Wells Ranch, Lake Dunlap
<b>Wagner</b>	1,246	6.32%	Lake Dunlap, Wells Ranch
<b>Linne Road MS</b>	501	2.54%	Wells Ranch
<b>Homestead</b>	124	0.63%	EA, Trinity, Wells Ranch, Lake Dunlap
<b>Damerau EST</b>	469	2.38%	Lake Dunlap
<b>Bolton Road MS</b>	68	0.35%	Wells Ranch
<b>TOTAL</b>	<b>19,701</b>	<b>98.51%</b>	

<sup>(1)</sup> Information provided by GVSUD

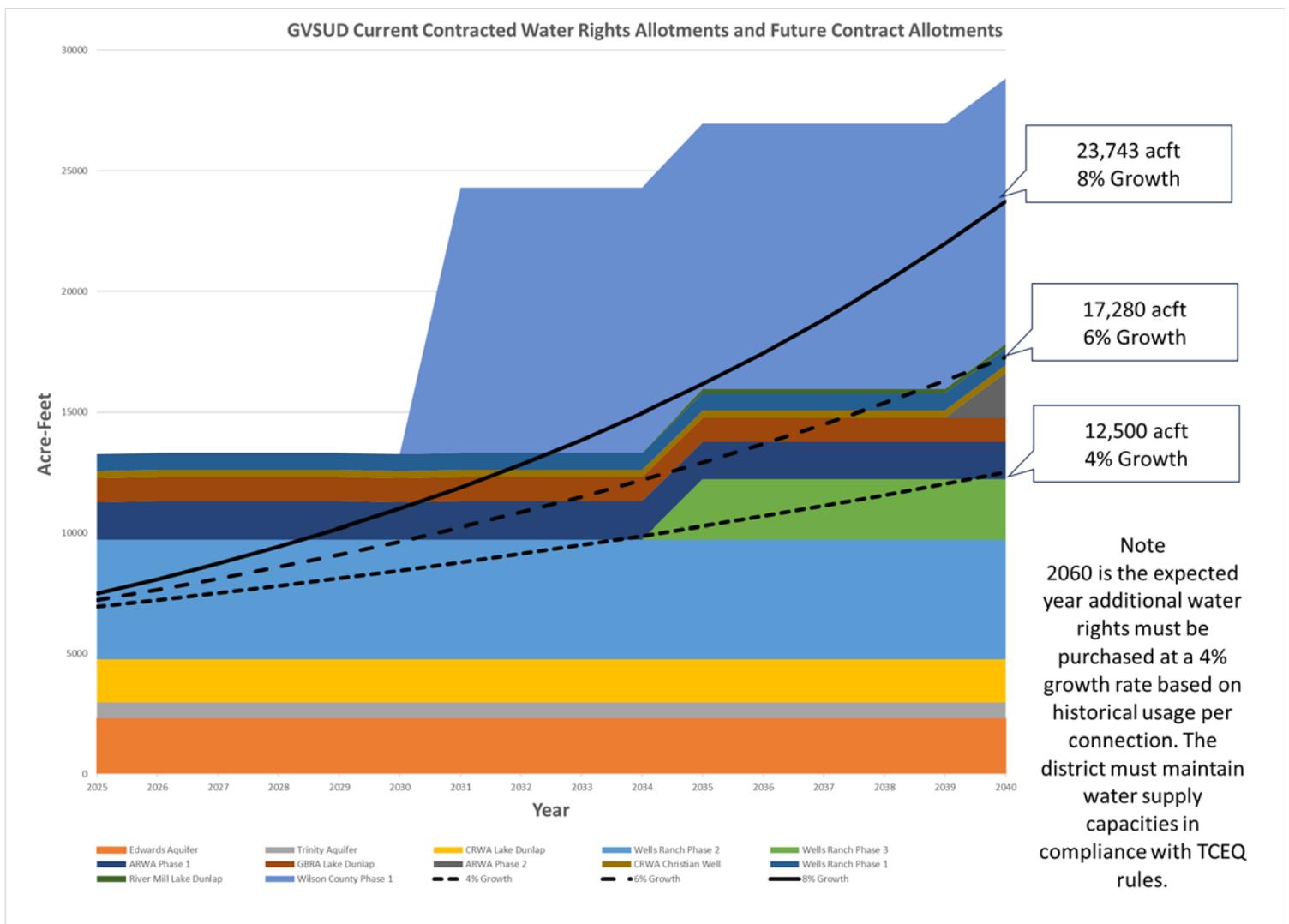
### 5.1 Existing Water Supply Capacity and Water Rights

GVSUD has a diversified supply of water with contracts with various sources. These include: three Edwards Wells, a Trinity Well, Canyon Regional Water Authority (CRWA) Lake Dunlap and Wells Ranch, and Alliance Regional Water Authority water. As of 2026 GVSUD has 13,270.48 acre-feet/year in existing water rights that can currently be produced without additional infrastructure. Based on the 10 year historic use for the District, this allotment will serve approximately 34,965 connection, basically doubling the current connection count for the District. Figure 5-1 along with Table 5-3 provide a summary of the current water rights in relation to the projected demand. GVSUD currently has approximately 2308.31 acre-feet of Edward Aquifer well water and 656 acre-feet of Trinity Aquifer well water available for use. It is important to note that the Edwards Aquifer water is regulated by the EAA and can experience extended periods of Critical Period Management (CPM) which reduces the amount of available water to the District. We

illustrate this in Table 5-3 with a 40% Critical Period Cutback. In 2025, the EAA CPM was 39%. These supplies are received and distributed through over 500 miles of waterline. Table 5-2 illustrates the pipe sizes and miles of lines that GVSUD owns and maintains.

**Table 5-2 GVSUD available water lines by size**

Line Size	1 inch	1.25 inch	1.5 inch	2 inch	3 inch	4 inch	6 inch
ft	230,178	3,946	111,597	423,257	10,613	564,538	271,338
miles	43.6	0.7	21.1	80.2	2.0	106.9	51.4
Line Size	8 inch	10 inch	12 inch	16 inch	20 inch	24 inch	TOTAL
ft	744,933	1,293	338,408	153,590	15,415	29,483	2,898,589
miles	141.1	0.2	64.1	29.1	2.9	5.6	548.98



**Figure 5-1 GVSUD Water Inventory and Future Demand**

**Table 5-3 GVSUD available water inventory**

Source	Permitted - Contracted Amount	Critical Period Cutback (Edwards 35%)	Current or Future Production
<b>Current Rights with Capacity to Produce</b>			
Edwards	2308.31	1500.4015	Current
Trinity	656	656	Current
GBRA Lake Dunlap	1000	1000	Current
CRWA Christian Well	306	306	Current
CRWA Lake Dunlap	1800	1800	Current
Wells Ranch Ph 1	700	700	Current
Wells Ranch Ph 2	4955.68	4955.68	Current
ARWA Phase 1	1544.49	1544.49	Current
	<b>13,270.48</b>	<b>12,462.57</b>	
<b>Future Capacity - Improvements needed to Produce</b>			
Wilson County Ph 1	11000	11000	2031
River Mill Dunlap	190	190	2035
Wells Ranch Ph 3	2500	2500	2035
ARWA Ph 2	1875.21	1875.21	2040
<b>TOTAL</b>	<b>28,835.69</b>	<b>23,652.57</b>	

## 5.2 Pressure Planes

The boundary of each pressure plane was determined from USGS topography with the help of GVSUD staff. The different water pressure planes are established based on desired minimum and maximum water pressures. The boundaries of the pressure planes are shown in Attachment ‘A’, GVSUD Existing Pressure Planes. Table 5-3 summarizes the equipment located in each pressure plane.

### 5.2.1 Plant 1-Plant 11 Pressure Plane Description

Plant 1-Plant 11 Pressure Plane serves the area in the northwestern part of GVSUD. This pressure plane has a hydraulic grade line of 1008 feet mean sea level (MSL). The water supply is provided by the Edwards Aquifer, the Trinity Aquifer, CRWA Lake Dunlap & Wells Ranch and ARWA in the future. The Weil Road Booster Pump station provides CRWA water and future ARWA water to this service area. This pressure plane currently serves 3,626 connections. A summary of the existing infrastructure is listed below:

#### Plant 1

- 200,000-gallon Ground Storage
- 1,000,000-gallon Elevated Storage
- 5,000-gallon Pneumatic Pressure Tank
- 3 Booster Pumps @ 450 gpm = 1,350 gpm

## Plant 11 Booster Pump Station

- 1,000,000-gallon Ground Storage
- 4 Booster Pumps @ 1,440 gpm = 5,760 gpm

### 5.2.2 Plant 2 Pressure Plane Description

Plant 2 Pressure Plane serves the area in the northeastern part of GVSUD within Plant 1 Pressure Plane. This pressure plane has a hydraulic grade line of 897 feet mean sea level (MSL). The water supply is provided by Plant 1. This pressure plane currently serves 434 connections. A summary of the existing infrastructure is listed below:

#### Plant 2

- 127,000-gallon Ground Storage
- 80,000-gallon Ground Storage
- 100,000-gallon Elevated Storage
- 4 Booster Pumps @ 450 gpm = 1,800 gpm

### 5.2.3 Plant 3 Pressure Plane Description

Plant 3 Pressure Plane serves the area south of the GVSUD Headquarters to IH 10 and east to City of Seguin. The water supply is provided by the CRWA Wells Ranch and Lake Dunlap supplies. This pressure plane has a hydraulic grade line of 830 feet MSL. This pressure plane currently serves 308 connections. A summary of the existing infrastructure is listed below:

- 127,000-gallon Ground Storage
- 80,000-gallon Ground Storage
- 1,000,000-gallon Elevated Storage
- 2 Booster Pumps @ 650 gpm = 1,300 gpm

### 5.2.4 Plant 4-Plant 12 Pressure Plane Description

Plant 4-Plant 12 Pressure Plane serves the northeast GVSUD service area. The water supply is provided by the CRWA's Lake Dunlap plant. This pressure plane has a hydraulic grade line of 830 feet MSL. This pressure plane currently serves 5,607 connections. CRWA-Lake Dunlap equipment is used to fill an elevated storage tank. A summary of the existing infrastructure is listed below:

- 500,000-gallon Elevated Storage – Plant 4
- 1,000,000-gallon Elevated Storage – Plant 12
- CRWA-Lake Dunlap tanks and high service pumps

### 5.2.5 Plant 5 Pressure Plane Description

Plant 5 Pressure Plane serves the area east of East Central Special Utility District service area and southwest of GVSUD's service area. The water supply is provided by the Edwards Aquifer and piped from Plant 7, 8, & 9 as well as CRWA supplies. This pressure plane currently serves 366 connections. A summary of the existing infrastructure is listed below:

- 60,000-gallon Ground Storage
- 3,000-gallon Pneumatic Pressure Tank
- 2 Booster Pumps @ 225 gpm = 450 gpm

### 5.2.6 Plant 14 Homestead Pressure Plane

The Plant 14 Pressure Plane serves the area of Homestead and Legendary Trails in the northern part of the District. The water supply is provided by three Edwards Aquifer wells, one Trinity well and CRWA Supplies through Plant 1. This pressure plane has a hydraulic grade line of 1,110 feet MSL. This pressure plane currently serves 18 connections. A summary of the existing infrastructure is listed below:

#### Plant 14

- 100,000-gallon Ground Storage
- 300,000-gallon Elevated Storage Tank
- 3 Booster Pumps @ 600 gpm = 1,800 gpm

### 5.2.7 Wells Pressure Plane (Plant 7, 8, & 9) Description

The Wells Pressure Plane serves the area in the northwest of GVSUD's service area. The water supply is provided by three Edwards Aquifer wells and one Trinity well. This pressure plane has a hydraulic grade line of 1008 feet MSL. This pressure plane currently serves 1,771 connections. A summary of the existing infrastructure is listed below:

#### Plant 7

- 200,000-gallon Ground Storage
- 5,000-gallon Pneumatic Pressure Tank
- 2 Booster Pumps @ 800 gpm = 1,600 gpm
- 2 Booster Pumps @ 450 gpm = 900 gpm
- Well #2, 1 Well Pump @ 800 gpm
- Well #3, 1 Well Pump @ 1,600 gpm
- Well #4, 1 Well Pump @ 600 gpm

#### Plant 8

- 200,000-gallon Ground Storage
- 5,000-gallon Pneumatic Pressure Tank
- Well #1, Well Pump @ 1,200 gpm
- Well #1, 1 Booster Pump @ 800 gpm
- Well #1, 1 Booster Pump @ 450 gpm

#### Plant 9

- 200,000-gallon Ground Storage

- 80,000-gallon Ground Storage
- 300,000-gallon Elevated Storage
- 2 Booster Pumps @ 500 gpm = 1,000 gpm
- 2 Booster Pumps @ 1,000 gpm = 2,000 gpm

### 5.2.8 Plant 10 Pressure Plane Description

Plant 10 Pressure Plane is located in the southeast area of GVSUD's service area. The water supply is provided by CRWA through a take point at Leissner Booster Pump Station. Plant 10 does not currently serve any connections, but is being maintained if needed in the future. A summary of the existing infrastructure is listed below:

- (2) ea. 250,000-gallon Ground Storage
- 13,000-gallon Pneumatic Pressure Tank
- 3 Booster Pumps @ 500 gpm = 1,500 gpm

### 5.2.9 1518 Tower Pressure Plane Description

The 1518 Pressure Plane serves the southwestern GVSUD service area. The water supply is provided by the CRWA FM 1518 elevated storage tank. This pressure plane has a hydraulic grade line of 880 feet MSL. This pressure plane currently serves 1,540 connections.

### 5.2.10 Leissner School Road Pressure Plane Description

The Leissner School Road Pressure Plane serves the area southeast of GVSUD service area. The water supply is Wells Ranch water provided by the CRWA's Leissner Booster Pump Station. This pressure plane currently serves 1,165 connections.

### 5.2.11 Haeckerville Pressure Plane Description

Haekerville Pressure Plane serves the area southwest of the Wagner service area. The water supply is provided by CRWA Wells Ranch, Lake Dunlap and future ARWA Phase I. This pressure plane currently serves 251 connections.

### 5.2.12 Wagner Pressure Plane Description

Wagner Pressure Plane serves the area southwest of the City of Marion. The area is served using CRWA's Wagner Booster Pump Station. This pressure plane has a hydraulic grade line of 880 feet MSL. This pressure plane currently serves 999 connections.

### 5.2.13 Damerau Tower Pressure Plane Description

Damerau Pressure Plane serves the northwestern GVSUD service area, within Plant 1, 2 & Weil Rd Pressure Plane. Water is provided by the CRWA elevated storage tank from Lake Dunlap. This pressure plane currently serves 451 connections.

### 5.2.14 Bolton Road Meter Station Pressure Plane Description

The Bolton Road Meter Station Pressure Plane serves the central GVSUD service area along IH 10. Water is provided by the CRWA Wells Ranch. This pressure plane currently serves 10 connections.

## 5.2.15 Linne Road Meter Station Pressure Plane Description

Linne Road Meter Station Pressure Plane serves the southcentral portion of GVSUD. This pressure plane currently serves 470 connections.

The GVSUD water system has enough capacity to meet current demands. As connections increase, the District will need to construct additional infrastructure to meet future demand as shown in this plan and associated analysis. Table 5-3 summarizes the current developments and associated service area. This is the basis for the following capacity calculations.

**Table 5-4 GVSUD existing developments**

<b>Green Valley Special Utility District</b>		
<b>Developments under contract</b>		
	<b># of EDU remaining</b>	<b>Service Area</b>
Marion Oaks	1665	Bolton/Wagner
Dove Song	888	Wagner
Kayden Springs	655	Bolton
Ann Austin Tract	880	Plant 11
Cibolo Farms	390	Homestead/Plant 1
Grace Valley	833	Plant 11
Hild Tract	134	Plant 11
Clearwater Creek	950	1518 EST
Lily Trails	700	1518 EST
Thea Springs	99	1518 EST
Century Oaks	105	Linne Road
Voges	253	Plant 4/12
Winding Creek Ranch	966	Plant 4/12
Hilltop	219	Plant 4/12
Park Place	785	Plant 4/12
Kraft Tract	550	Plant 4/12
Avilla Homestead	289	Plant 4/12
Engel Tract	59	Plant 1
Omni Tract	50	Bolton
WBWT West End	278	Plant 4/12
JM Eagles Nest	1	Plant 1
Guadalupe Bend	1200	Plant 4/12
<b>Total</b>	<b>11949</b>	

The following tables illustrate the capacity impacts of the growth and planned CIP projects introduced in this report. Please note that this analysis was completed using only the contracts that are currently in place with no additional land developing in the system. For this reason, this plan should be monitored annually and updated periodically as additional information becomes available.

**Table 5-5 GVSUD Current Capacities**

Existing Equipment								
Plane Name	Over Flow Elevation (MSL)	Connections	Booster Pump	Well Pumps	Pneumatic Pressure Tank (Gallons)	GST Capacity (Gallons)	EST Capacity (Gallons)	Total Storage (Gallons)
Plant 1	1008	4,745	3 @ 450 gpm		5,000	200,000	1,000,000	1,200,000
Plant 2		782	4 @ 450 gpm <b>(1,800 gpm)</b> 2 @ 650 <b>(1,300 gpm)</b>			207,000	100,000	307,000
Plant 3	830	309				500,000	1,000,000	1,500,000
Plant 4-Plant 12	830	6,222					1,500,000	1500000.00
Plant 5		371	2 @ 225 gpm <b>(450 gpm)</b>		3,000	60,000		60000
Wells Pressure Plane	Plant 7	140	2 @ 800 gpm <b>(1,600 gpm)</b> 2 @ 50 gpm <b>(900 gpm)</b>		5,000	200,000		200000
	Plant 7, Well #2			1 @ 800 gpm				
	Plant 7, Well #3			1 @ 1,600 gpm				
	Plant 7, Well #4			1 @ 600 gpm				
	Plant 8							
	Plant 8, Well #1			1 @ 800 gpm 1 @ 450 gpm 2 @ 500 gpm <b>(1,000 gpm)</b> 2 @ 1,000 gpm <b>(2,000 gpm)</b>				
Plant 9	1,634				500,000	1,000,000	1,500,000	
Plant 10		0	3 @ 500 gpm <b>(1,500 gpm)</b>		13,000	500,000		500000
Plant 11	1008	0	4 @ 1440 gpm <b>(5,760 gpm)</b>			1,000,000		1000000
Plant 14	1110	124					300,000	300,000
1518 Tower	880	1,620						
Bolton Road Meter Station		68						
Leissner School Rd		1,201						
Haeckerville		269						
Wagner	880	1,246						
Damerau Tower		469						
Linne Road Meter Station		501						
TOTAL		19,701	16,060	4,200	31,000	3,367,000	4,900,000	8,267,000
Capacity per Connection			0.82	1.86		170.91	248.72	419.62

Table 5-4 shows the current status of capacity and service within the District. The District is performing well, however, as development continues to advance the District will need to construct additional infrastructure capacity to maintain compliance with TCEQ regulations for public water systems and maintain overall operational capacity to provide continuous and adequate service to the rate payers. Table 5-5 illustrates the District status if the referenced developments deliver connections as intended and capacity is not added to the system.

**Table 5-6 GVSUD 2029 Capacity without Proposed Capital Improvements**

Green Valley Special Utility District (2029)								
Existing Equipment								
Plane Name	Over Flow Elevation (MSL)	Connections	Booster Pump	Well Pumps	Pneumatic Pressure Tank (Gallons)	GST Capacity (Gallons)	EST Capacity (Gallons)	Total Storage (Gallons)
Plant 1	1008	5,958	3 @ 450 gpm		5,000	200,000	1,000,000	1,200,000
Plant 2		932	4 @ 450 gpm			207,000	100,000	307,000
Plant 3	830	368	4 @ 450 gpm <b>(1,800 gpm)</b>			500,000	1,000,000	1,500,000
Plant 4-Plant 12	830	7,419					1,500,000	1500000.00
Plant 5		442	2 @ 225 gpm		3,000	60,000		60000
Wells Pressure Plane	Plant 7	300	2 @ 800 gpm		5,000	200,000		200000
	Plant 7, Well #2			1 @ 800 gpm				
	Plant 7, Well #3			1 @ 1,600 gpm				
	Plant 7, Well #4			1 @ 600 gpm				
	Plant 8				5,000	200,000		200000
	Plant 8, Well #1			1 @ 800 gpm	1 @ 1,200 gpm			
	Plant 9		2,248	2 @ 500 gpm <b>(1,000 gpm)</b> 2 @ 1,000 gpm <b>(2,000 gpm)</b>			500,000	1,000,000
Plant 10		0	3 @ 500 gpm <b>(1,500 gpm)</b>		13,000	500,000		500000
Plant 11	1008	0	4 @ 1440 gpm <b>(5,760 gpm)</b>			1,000,000		1000000
Plant 14	1110	348	3 @ 600 gpm <b>(1,800 gpm)</b>				300,000	300,000
1518 Tower	880	1,932						
Bolton Road Meter Station		81						
Leissner School Rd		1,632						
Haeckerville		406						
Wagner	880	1,686						
Damerau Tower		559						
Linne Road Meter Station		597						
TOTAL		24,909	16,060	4,200	31,000	3,367,000	4,900,000	8,267,000
Capacity per Connection			0.64	1.38		135.17	196.72	331.89

Connection data provided by GVSUD based on December 2025 status.

Table 5-6 illustrates the District status if the referenced developments deliver connections as intended and capacity is shown in the 5 year CIP plan is added to the system as intended.

**Table 5-7 GVSUD 2029 Capacity with Proposed Capital Improvements**

Green Valley Special Utility District (2029) Proposed CIP & Development Growth									
Plane Name		Over Flow Elevation (MSL)	Connections	Booster Pump	Well Pumps	Pneumatic Pressure Tank (Gallons)	GST Capacity (Gallons)	EST Capacity (Gallons)	Total Storage (Gallons)
Plant 1		1008	3,695	3 @ 450 gpm		5,000	200,000	1,000,000	1,200,000
Plant 2			932	4 @ 450 gpm			207,000	100,000	307,000
Plant 3		830	368	4 @ 750 gpm <b>(3,000 gpm)</b>			500,000	1,000,000	1,500,000
Plant 4-Plant 12		830	7,419	4 @ 1440 gpm <b>(5,760 gpm)</b>			500,000	1,500,000	1,627,000
Plant 5			442	2 @ 225 gpm		3,000	60,000		60,000
Wells Pressure Plane	Plant 7		300	2 @ 800 gpm		5,000	200,000		200,000
	Plant 7, Well #2				1 @ 800 gpm				
	Plant 7, Well #3				1 @ 1,600 gpm				
	Plant 7, Well #4				1 @ 600 gpm				
	Plant 8					5,000	200,000		200,000
	Plant 8, Well #1			1 @ 800 gpm	1 @ 1,200 gpm				
	Plant 9		2,248	2 @ 500 gpm <b>(1,000 gpm)</b> 2 @ 1,000 gpm <b>(2,000 gpm)</b>			200,000 80,000	1,000,000	1,280,000
Plant 10			0	3 @ 500 gpm <b>(1,500 gpm)</b>		13,000	2 @ 250,000 (500,000)		500,000
Plant 11		1008	0	4 @ 1440 gpm <b>(5,760 gpm)</b>			1,000,000		1,000,000
Plant 14		1110	348	3 @ 600 gpm <b>(1,800 gpm)</b>			100,000	300,000	400,000
Plant 15		830		4 @ 750 gpm <b>(3,000 gpm)</b>			500,000	1,000,000	1,500,000
Plant 16				4 @ 750 gpm <b>(3,000 gpm)</b>			500,000	1,000,000	1,500,000
Plant 17		1008	2,263	4 @ 750 gpm <b>(3,000 gpm)</b>			500,000	1,000,000	1,500,000
1518 Tower		880	1,932						
Bolton Road Meter Station			81						
Leissner School Rd			1,632						
Haeckerville			406						
Wagner		880	1,686						
Damerau Tower			559						
Linne Road Meter Station			597						
TOTAL			24,909	32,850	4,200	31,000	4,294,000	6,400,000	10,694,000
Capacity per Connection				1.32	2.02		172.39	256.94	429.33

Connection data provided by GVSUD based on December 2025 status.

Table 5-7 illustrates the District status if the referenced developments deliver connections as intended and capacity is shown in the 5 year CIP plan is added to the system as intended.

**Table 5-8 GVSUD 2034 Capacity with Proposed Capital Improvements**

Green Valley Special Utility District (2034) Proposed CIP & Development Growth									
Plane Name		Over Flow Elevation (MSL)	Connections	Booster Pump	Well Pumps	Pneumatic Pressure Tank (Gallons)	GST Capacity (Gallons)	EST Capacity (Gallons)	Total Storage (Gallons)
Plant 1		1008	4,152	3 @ 450 gpm		5,000	200,000	1,000,000	1,200,000
Plant 2			1,121	4 @ 450 gpm			207,000	100,000	307,000
Plant 3		830	808	4 @ 750 gpm <b>(3,000 gpm)</b>			500,000	1,000,000	1,500,000
Plant 4-Plant 12		830	7,640	4 @ 1440 gpm <b>(5,760 gpm)</b>			127,000	1,500,000	1,627,000
Plant 5			616	2 @ 225 gpm		3,000	60,000		60,000
Wells Pressure Plane	Plant 7		961	2 @ 800 gpm		5,000	700,000	500,000	1,200,000
	Plant 7, Well #2			4 @ 500 gpm <b>(2,000 gpm)</b>	1 @ 800 gpm				
	Plant 7, Well #3				1 @ 1,600 gpm				
	Plant 7, Well #4				1 @ 600 gpm				
	Plant 8					5,000	200,000		200,000
	Plant 8, Well #1			1 @ 800 gpm	1 @ 1,200 gpm				
	Plant 9			2 @ 500 gpm <b>(1,000 gpm)</b> 2 @ 1,000 gpm <b>(2,000 gpm)</b>			500,000	1,000,000	1,500,000
Plant 10			0	3 @ 500 gpm <b>(1,500 gpm)</b>		13,000	500,000		500,000
Plant 11		1008	1,724	4 @ 1440 gpm <b>(5,760 gpm)</b>			1,000,000		1,000,000
Plant 14		1110	568	3 @ 600 gpm <b>(1,800 gpm)</b>			100,000	300,000	400,000
Plant 15		830	600	4 @ 750 gpm <b>(3,000 gpm)</b>			500,000	1,000,000	1,500,000
Plant 16			400	4 @ 750 gpm <b>(3,000 gpm)</b>			500,000	1,000,000	1,500,000
Plant 17			2,450	4 @ 750 gpm <b>(3,000 gpm)</b>			500,000	1,000,000	1,500,000
Plant 18		1008	1,000	4 @ 750 gpm <b>(3,000 gpm)</b>			500,000	1,000,000	1,500,000
Plant 19			3,000	4 @ 750 gpm <b>(3,000 gpm)</b>			500,000	1,000,000	1,500,000
1518 Tower		880	2,130						
Bolton Road Meter Station			300						
Leissner School Rd			1,884						
Haackerville			501						
Wagner		880	2,053						
Damerau Tower			600						
Linne Road Meter Station			825						
TOTAL			33,333	30,060	4,200	31,000	6,594,000	10,400,000	16,994,000
Capacity per Connection				0.90	1.90		197.82	312.00	509.83

Connection data provided by GVSUD based on December 2025 status.

## 6.0 TCEQ Design Standards

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The Texas Commission on Environmental Quality (TCEQ) established minimum design standards (30 TAC §290.45) that ensure a water system is capable of meeting the demands of its customers. Additionally, TCEQ does not include consideration for additional fire flows that may be necessary for future development in their minimum requirements. These standards must be met to be compliant within the state.

### Water Treatment Plant

- Treatment capacity for a water treatment plant is 0.6 gpm/connection (must be greater than the anticipated maximum daily demand)

### Minimum Water Storage

- Total Storage: 200 gallons/connection
- Elevated Storage: 100 gallons/connection
- Pressure Tank: 20 gallons/connection (in lieu of elevated storage up to 2,500 connections)

### Minimum Pumping Capacity

- If less than 200 gallons/connection of elevated storage is provided, two or more pumps with a total capacity of 2.0 gpm/connection, or that have a total capacity of at least 1,000 gpm and the ability to meet peak hourly demands with the largest pump out of service, whichever is less.
- If at least 200 gallons/connection of elevated storage is provided: two or more pumps with a minimum capacity of 0.6 gpm/connection.

## 7.0 GVSUD Design Requirements

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UEG used historical water usage records to establish design requirements to ensure that minimum service equals or exceeds the minimum requirements set by TCEQ and meets or exceeds GVSUD future water demands.

As a whole, GVSUD design requirements exceed the minimum criteria established by TCEQ. GVSUD current water system is in full compliance with TCEQ and is able to meet current demands in the system. GVSUD's historical water usage records are found in Table 7-1.

**Table 7-1 GVSUD Historic Water Use**

Year	GVSUD Water Service Connections	Daily Avg. Pumped (gpd)	Daily Avg. Pumped per Conn. (gpd/Conn)	Average Daily Water Usage per Conn. (gpm/Conn)	Peak Hour Water Usage per Conn. (gpm/Conn)*
2016	11645	3150712	270.56	0.19	0.8
2017	12329	3697022	299.86	0.21	0.8
2018	13331	3686104	276.51	0.19	0.8
2019	13990	3832543	273.95	0.19	0.8
2020	14358	4737784	329.98	0.23	0.9
2021	15273	4912762	321.66	0.22	0.9
2022	16325	5573391	341.40	0.24	0.9
2023	17499	5728728	327.37	0.23	0.9
2024	18142	5952807	328.12	0.23	0.9
2025	19730	6169743	312.71	0.22	0.9
Average			308.21	0.21	0.9

Table 7-1 shows the average daily and peak hour water usage. The last 10 years of data was used to represent modern operating conditions. The average water used for the past 10 years is 0.21 gpm/connection, the average daily demand is 308.21gpd/connection is up from 270.56 gpd/connection in 2016, and the peak hour demand is 0.9 gpm/connection. These values were used in determining GVSUD’s design requirements.

Calculations include only infrastructure and capacity owned and operated by GVSUD. Including CRWA infrastructure would provide a more accurate portrayal of the system in place, however we did not include their capacities since TCEQ views this as unowned capacity and therefore, does not give any credit toward that capacity in the overall system. Water production capacity is designed to meet historical peak daily demand. System storage is designed and based on average daily demand. Annual evaluations of the average daily demand and peak daily demand of water flows should be conducted based on daily records of pumping for the calendar year. GVSUD design requirements for the average and peak flows are as follows:

- Average Daily Demand: 354 gpd/connection
- Peak Daily Demand: 709 gpd/connection
- Peak Hour Demand: 0.9 gpm/connection + Fire Flow

The average daily demand of 347 gpd/connection is based on the 10-year historic average of 308.21 gpd/connection with an additional 15-percent safety factor. The maximum peak daily demand of 694 gpd/connection is based on the average maximum with a peak factor of 2, the industry standard for an average water system.

The water supply capacity of 0.24 gpm/connection was determined by taking the average daily

demand and adding an additional 15-percent. The daily average pumped for each year of 354 gpd/connection represents full 24 hours of storage capacity. This value was halved to allow for 12 hours of total storage capacity. The same ratio that TCEQ established in their design criteria was used to calculate ground and elevated storage. The elevated storage requirement from TCEQ was half of the total storage. Therefore, a total storage of 177 gallons/connection and elevated storage of 88.5 gallons/connection of elevated storage was established. Table 7-2 summarizes and compares the requirements between TCEQ and GVSUD. The more stringent value will be used for future capacity criteria.

**Table 7-2 TCEQ vs GVSUD design criteria Current**

<b>Design Criteria 2026</b>			
<b>Description</b>	<b>TCEQ (minimum)</b>	<b>Green Valley SUD (existing)</b>	<b>Green Valley SUD (demand)</b>
Water Rights (acre-feet/connection/year)		0.70	0.35
Water Plant Supply (gpm/connection)	0.6	1.86	0.2
Total Storage (gallons/connection)	200	419.62	354
Ground Storage (gallons/connection)	-	170.91	88.5
Elevated Storage (gallons/connection)	100	248.72	88.5
Pumping (gallons/connection)	0.6	0.82	0.9

**Table 7-3 TCEQ vs GVSUD design criteria 2029 without CIP**

<b>Design Criteria 2029 without CIP Projects Implemented</b>			
<b>Description</b>	<b>TCEQ (minimum)</b>	<b>Green Valley SUD (existing)</b>	<b>Green Valley SUD (demand)</b>
Water Rights (acre-feet/connection/year)		0.70	0.37
Water Plant Supply (gpm/connection)	0.6	1.38	0.26
Total Storage (gallons/connection)	200	331.89	177
Ground Storage (gallons/connection)	-	135.17	88.5
Elevated Storage (gallons/connection)	100	196.72	88.5
Pumping (gallons/connection)	0.6	0.64	0.9

**Table 7-4 TCEQ vs GVSUD design criteria 2029 with CIP**

<b>Design Criteria 2029 CIP Projects Implemented</b>			
<b>Description</b>	<b>TCEQ (minimum)</b>	<b>Green Valley SUD (existing)</b>	<b>Green Valley SUD (demand)</b>
Water Rights (acre-feet/connection/year)		0.70	0.37
Water Plant Supply (gpm/connection)	0.6	1.32	0.26
Total Storage (gallons/connection)	200	536.64	177
Ground Storage (gallons/connection)	-	219.48	88.5
Elevated Storage (gallons/connection)	100	317.16	88.5
Pumping (gallons/connection)	0.6	1.32	0.9

**Table 7-5 TCEQ vs GVSUD design criteria 2034 with CIP**

<b>Design Criteria 2034 CIP Projects Implemented</b>			
<b>Description</b>	<b>TCEQ (minimum)</b>	<b>Green Valley SUD (existing)</b>	<b>Green Valley SUD (demand)</b>
Water Rights (acre-feet/connection/year)		0.87	0.37
Water Plant Supply (gpm/connection)	0.6	1.90	0.26
Total Storage (gallons/connection)	200	509.83	177
Ground Storage (gallons/connection)	-	197.82	88.5
Elevated Storage (gallons/connection)	100	312.00	88.5
Pumping (gallons/connection)	0.6	0.90	0.9

As you can see in table 7-3, if the District does not implement the CIP projects to add pump capacity to the system, the system approaches the TCEQ minimum for pumping capacity. The system also decreased available storage in the system by almost 90 gallons per connection, approximately one third less storage per connection than the District has available today for service. It is important to note that TCEQ does not build in fireflow capacities into their minimums, so it is very important that the District exceeds the minimum requirements to ensure adequate fireflow is available for the service area. Additionally, by 2034 with the implementation of the proposed CIP projects, the District can maintain the current capacities in the system and provide the same level of service that they provide today.

## 8.0 Recommended Capital Improvements

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In order to meet growing demands projected from new developments and increasing population, there are recommended improvements to GVSUD's water system. Table 8-1 and 8-2 provide the prioritized projects, with Staff input, for the years 2024-29 and 2030-2034 and Exhibit 2 summarize the recommended capital improvements identified to meet GVSUD's needs for the next 10 years. We have also provided a listing of operational improvement projects in Table 8-3 that summarize the staff lead projects that need to be completed to abandon lines that have high tendency of leak repairs, dead end mains, or other factors that impact operations. These projects cannot be included in the Water Impact Fee assessment, they will need to be financed through the District's operating budget, operating reserves or loan backed by operating income, net of impact fees.

**Table 8-1 Year 2026-2031 CIP Projects**

Priority	Project Number	Description	Pipe Length (LF)	Total Cost
		<b>Target Projects Years 0-5</b>		
1	5	Plant 3 Pump station and GST	-	\$ 5,602,211.06
2	2	Plant 15 Lower Seguin Road EST, GST & Pump Station	-	\$ 11,198,246.81
3	1B	Trainer Hale Plant - Land Acquisition		\$ 146,500.00
4	7	Trainer Hale - 1518 Pump Station, EST, GST	-	\$ 11,766,737.81
5	26	Plant 17 Pump Station and GST	-	\$ 8,972,233.96
6	55	Plant 12 Pump station, GST	-	\$ 5,602,211.06
7	24	16" Pipe along FM 725, Guadalupe Bend to Terminal Loop	20200	\$ 5,623,766.04
8	1D	Gin/Santa Clara - Land Acquisition		\$ 146,500.00
9	9	12" Pipe along Gin Road - Santa Clara to FM 2538	18800	\$ 4,204,309.10
10	32	16" Pipe along Lower Seguin Rd - Haeckerville Road to Plant 15	10650	\$ 2,813,123.52
11	3	16" Pipe replacing 8" on Bolton Road - Go Cart track to Haeckerville Road	5100	\$ 1,589,465.89
12	4	16" Pipe along Lower Seguin Rd - Plant 15 to Santa Clara Road	6200	\$ 1,762,970.03
13	8	16" Pipe along Altwein - FM 725 to Hardy Road	7000	\$ 1,969,144.06
14	10	16" Pipe along FM 1044 Hilltop Estates to Plant 2 Distribution Line	3500	\$ 978,068.22
		<b>Total Projected Cost - Target Projects Years 0-5</b>		\$ 62,375,487.56

**Table 8-2 Year 2031-2036 CIP Projects**

Priority	Project Number	Description	Pipe Length (LF)	Total Cost
		<b>Target Projects Years 6-10</b>		
15	11	12" Pipe along N Santa Clara Rd - Persimmon Trails to FM 78/Santa Clara Road	7,030	\$ 1,654,686.10
16	13	8" Pipe along Crystal Valley Dr	1,230	\$ 334,473.08
17	14	8" Pipe Green Valley Road & FM 1044 for Plant 2 to Plant 1 backfeed	575	\$ 223,556.00
18	15	8" Pipe along Miller Road from FM 2538 to New Berlin Road	12,050	\$ 2,699,903.03
19	16	12" Pipe along Dean Road - Flush valve to flush valve	4,700	\$ 872,928.85
20	17	Plant 9 improvements - 1 MG EST	-	\$ 5,552,068.95
21	19	16" Pipe Southpoint - Plant 4 to Plant 12	2,300	\$ 720,116.87
22	20	12" Pipe along IH 10 - Spur Trail to FM 725	9,250	\$ 1,902,931.62
23	21	12" Pipe along IH 10 - Pioneer Road to Nickerson Farms Road	6,400	\$ 903,409.59
24	22	8" Pipe along Partnership Road - FM 775 to CR 311	4,500	\$ 863,713.48
25	23	12" Pipe along Terminal loop - FM 725 to Treasure Cove	2,850	\$ 693,635.39
26	25	12" Pipe along FM 482	12,750	\$ 2,521,057.87
27	27	12" Pipe along Country Lane - Tolle Road to Cross FM 78	2,950	\$ 778,211.87
28	30	16" Pipe along FM 78 - Venado to Haecherville	7,200	\$ 2,186,827.37
29	31	8" Pipe along Lower Valle Ln Weir Rd to Haeckerville Rd	5,070	\$ 1,175,594.34
30	33	16" Pipe along Schmoekel Road - Stolte to Santa Clara Road	9,050	\$ 2,256,459.95
31	34	16" Pipe along FM 1044 from Winding Creek Ranch to Youngsford	5,850	\$ 1,745,503.16
32	35	16" Pipe along Weil Road - Brite Road to Country Vale	3,900	\$ 674,125.94
33	36	16" Pipe along Zuehl Road - Bolton to Cross IH 10	1,530	\$ 572,421.74
34	37	8" Pipe along E. Zipp - FM 725 to River Bend	2,300	\$ 675,382.04
35	38	16" Pipe along Stagecoach Road - Santa Clara to Pioneer Road	27,000	\$ 7,389,541.95
36	39	16" Pipe along Green Valley Road Plant 1 to Plant 2	31,500	\$ 8,651,733.78
37	40	12" Pipe along Marion Road from CRWA Pipe to GV Road	7,950	\$ 1,730,190.31
38	41	12" Pipe along Schwab & Wosnig	18,800	\$ 4,588,473.66
39	42	EST on Youngsford/FM 1044 (Plant 18)	-	\$ 12,319,302.81
40	43	750' EST @ Gin Road & Santa Clara Road (Plant 19)	-	\$ 10,914,001.31
41	44	12" Pipe along FM 775 - Leissner School Rd to Beutnagel Ln	11,600	\$ 2,636,879.74
42	45	8" Pipe along New Berlin Rd - Miller Road to loop back to FM 2538 & Miller Road	18,850	\$ 3,942,016.14
43	46	12" Pipe along Engel Rd - Green Valley Rd to Service Boundary	3,960	\$ 729,343.28
44	47	16" Pipe along Union Wine from FM 1044 to Sunshine Lane	9,700	\$ 2,710,190.84
45	48	16" Pipe along Youngsford from FM 1044 to FM 725	20,200	\$ 5,522,004.14
46	49	16" Pipe along FM 1044 from Youngsford to Wosnig Road	13,850	\$ 3,889,065.61
47	50	12" Pipe connecting on Coy Lane	2,330	\$ 309,864.99
48	51	12" Pipe along FM 465 - GVSUD HQ to Stagecoach Road	7,950	\$ 1,791,817.44
49	52	12" Pipe along Youngsford Road from Country Lane to Santa Clara	5,160	\$ 1,199,591.45
50	53	16" Pipe along FM 2252 - IH 35 to Plant 7	11,750	\$ 3,423,780.23
51	54	16" Pipe along Haecherville Road - Bolton to Valley View	4,000	\$ 1,105,687.65
		<b>Total Projected Cost - Target Projects Years 6-10</b>		<b>\$ 101,860,492.57</b>

**Table 8-3 Operational Improvement Projects**

Project	Description	Total Cost
	<b>Operational Projects - Operating costs</b>	
1000	IN PROGRESS - Treasure Island, Woodlakes, Lake McQueeney Estates Replacements	\$ 6,578,941.39
1001	8" Pipe along Lake Bend Drive to replace 1.25-2" Steel line	\$ 372,140.17
1002	8" Pipe Plant 6 through Lakeview Trail	\$ 738,426.04
1003	8" Pipe along Hot Shot Lane - Bamboo Bluff to Isle of View	\$ 285,696.84
1004	8" Pipe along Rosewood Trail to CR 301	\$ 576,533.50
1006	8" Pipe Leisure Village from FM 725	\$ 1,484,632.05
1007	8" Pipe Wosnig to Gembler to replace 4 inch	\$ 805,551.47
1008	8" Zipp Avenue - Old San Antonio Road to FM 78	\$ 133,390.92
1009	8" McQueeney Elementary School FM 725	\$ 494,307.25
1010	8" Pipe along FM 725 - Hwy 90 to end of current 1.5" PVC line	\$ 1,509,340.88
1011	8" Pipe along Woodcreek Circle	\$ 759,732.99
1012	8" Pipe Republic Plastics to McQueeney Road	\$ 324,596.49
1013	8" Hard Luck Road to FM 78	\$ 1,620,770.99
1014	12" along FM 78 Schumann Road to McQueeney Road	\$ 396,448.58
1015	Connect line at Buch Ln and Tillinghat	\$ 624,943.55
1016	8" Pipe Lakeside Pass to connect deadends	\$ 263,344.35
1017	8" Pipe connection Schumann Beach (4" to 2" Loop Connection)	\$ 750,797.01
1018	8" Pipe River Bend Drive - Placid Cove to E. Zipp Road	\$ 245,736.42
1019	8" Pipe along FM 425	\$ 805,000.00
1021	Upgrade waterlines Santa Clara Loop, Cody Lane, Cale Dr., Kiser Lane to add fireflow/replace aging lines	\$ 3,798,362.15
1022	Wunless Drive service replacement	\$ 157,442.19
1023	8" Schumann Road replacement	\$ 400,000.00
1024	8" Pipe along Kunde Road	\$ 500,000.00
	<b>Total Projects Cost - Operational Projects</b>	<b>\$ 23,626,135.23</b>

**Table 8-4 Operational Improvement Projects Completed**

Project	Description	Total Cost
	<b>Operational Projects - Operating cost Completed</b>	
1005	Plant 8 Standby Generator	\$ 238,904.58
1020	Plant 9 Standby Generator	\$ 248,379.43
	<b>Total Projects Cost - Operational Projects Completed</b>	<b>\$ 487,284.01</b>

## 8.1 Proposed Water Supply

The water supply projects proposed for the District at this time consist of ARWA Phase II, CRWA Wells Ranch Phase III, and Lake Dunlap Expansion to treat the District's GBRA and River Mill water rights. These sources total approximately 3,375 acre-feet of water, depending on final contracts with ARWA for that supply. This 3,375 AF of water will accommodate approximately 10,227 EDUs of service at the 10-year historic average of 0.34 AF/connection or 8,438 EDUs at the 0.4 AF/connection that we use for planning. It is recommended that the District consider additional water from ARWA if it becomes available since many of the pump station and transmission main components have already been confirmed and planned. Easements have also been acquired for additional ARWA deliver mains, therefore, the Phase II water should bring the average water cost for that project below the current Phase I costs.

## 9.0 Conclusions and Recommendations

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As you can see after reviewing the 2026 Master Plan Amendment and evaluating the projects completed under the previous plan, the District is growing and the growth requires capital investment to maintain compliance with TCEQ, local, state, federal regulation as well as the expectations of the rate payers and customers. This Master Plan is a road map for the foreseeable future and should be updated at least every 5 years. The plan should be used as a guide to maintain compliance, a budgeting tool for capital investment and the basis for the future impact fee study in compliance with Chapter 395 of the Local Government Code. The Board and Staff should review the projects often and prepare a Capital Budget to construct the projects.

The intent is to identify the projects and prioritize them on an annual basis during budget preparation so that the District can meet the goals of the study and meet the needs of the District. Priorities may change on an annual basis based on development hotspots, maintenance needs, outside agency projects (TxDOT, County, Cities) or other factors.

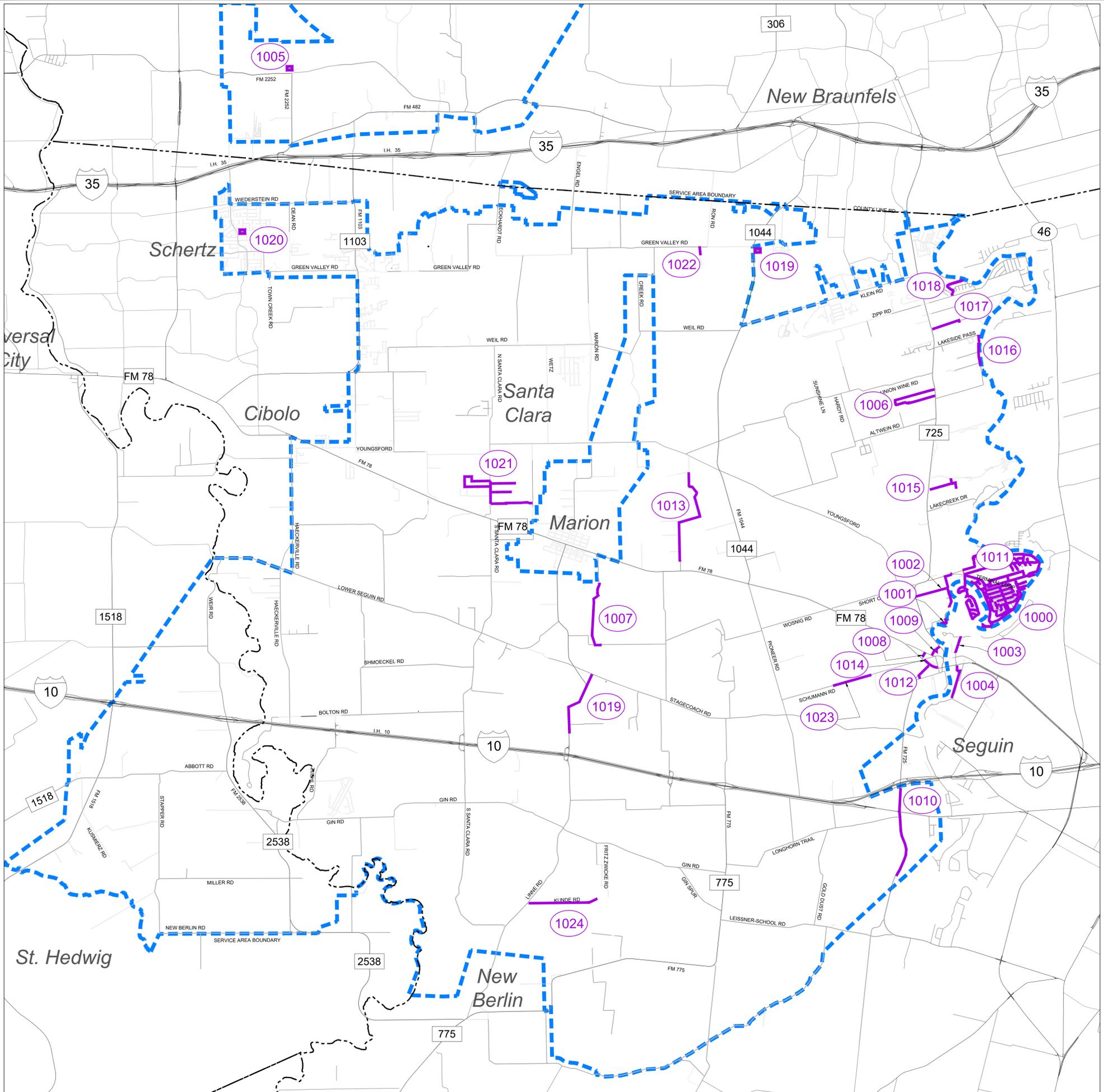
The operational projects should be budgeted in the operating budget and are not impact fee eligible for revenue or expenses. These projects will need to be included in future rate designs and budgets as prioritized by staff.

# Appendix A: Exhibits

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*Exhibit 2: Proposed Capital Improvements*

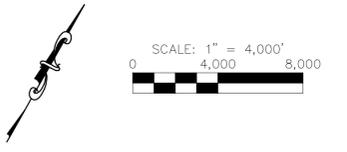




**LEGEND**

- PARCELS
- COUNTY LINE
- GVSUD WATER CCN
- OPERATIONAL PROJECTS

GREEN VALLEY SPECIAL UTILITY DISTRICT OPERATIONAL PROJECTS	
1000	IN PROGRESS - TREASURE ISLAND, WOODLAKES, LAKE MCQUEENEY ESTATES REPLACEMENTS
1001	8" PIPE ALONG LAKE BEND DRIVE TO REPLACE 1.25 - 2" STEEL LINE
1002	8" PIPE PLANT 6 THROUGH LAKEVIEW TRAIL
1003	8" PIPE ALONG HOT SHOT LANE - BAMBOO BLUFF TO ISLE OF VIEW
1004	8" PIPE ALONG ROSEWOOD TRAIL TO CR 301
1006	8" PIPE LEISURE VILLAGE FROM FM 725
1007	8" PIPE WOSNIG TO GEMBLER TO REPLACE 4 INCH
1008	8" ZIPP AVENUE - OLD SAN ANTONIO ROAD TO FM 78
1009	8" MCQUEENEY ELEMENTARY SCHOOL FM 725
1010	8" PIPE ALONG FM 725 - HWY 90 TO END OF 1.5" PVC LINE
1011	8" PIPE ALONG WOODCREEK CIRCLE
1012	8" PIPE REPUBLIC PLASTICS TO MCQUEENEY ROAD
1013	8" HARD LUCK ROAD TO FM 78
1014	12" ALONG FM 78 - SCHUMANN ROAD TO MCQUEENEY ROAD
1015	CONNECT LINE AT BUCH LN AND TILLINGHAT
1016	8" PIPE LAKESIDE PASS TO CONNECT DEADENDS
1017	8" PIPE CONNECTION SCHUMANN BEACH (4" TO 2" LOOP CONNECTION)
1018	8" PIPE RIVER BEND DRIVE - PLACID COVE TO E. ZIPP ROAD
1019	8" PIPE ALONG FM 425
1021	UPGRADE WATERLINES SANTA CLARA LOOP, CODY LANE, CALE DR., KISER LANE TO ADD FIREFLOW / REPLACE AGING LINES
1022	WUNLESS DRIVE SERICE REPLACEMENT
1023	8" SCUMANN ROAD REPLACEMENT
1024	8" PIPE ALONG KUNDE ROAD



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 GARRY D. MONTGOMERY, JR.  
 TYPE OR PRINT NAME  
 114438 PE# 2/17/26 DATE

SCALE:	
DATE: 17 February, 2026	
PROJECT NO:	
DESIGNED BY:	
CHECKED BY:	
SHEET NO:	1
OF 1 SHEETS	
NO.	REVISIONS
APPD.	DATE

**GREEN VALLEY SPECIAL UTILITY DISTRICT**  
**OPERATIONAL PROJECTS MAP 2026**

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